APPENDIX F

QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT

RC BIOLOGICAL CONSULTING, Inc.
4215 Spring Street, Suite 321, La Mesa, CA 91941
Phone: (619) 463-1072 fax: (619) 463-0859
email: info@rcbio.com

Miss Sandy Marquez
U. S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92009

May 14, 2007

Subject: ***45-Day Report for the Lakeside Self Storage Property (APN 392-070-02) Quino Checkerspot Butterfly Flight Survey, Lakeside, San Diego County, California PERMIT #TE-134332-0, TE-812206-3 and TE-053020-1***

Dear Miss Marquez:

This report documents the results of six (6) flight survey visits conducted by Andrew Drummond (Permit #TE-134332-0), Robin Church (Permit #TE-812206-3) and Sara Thorne (Permit #TE-053020-1) for the presence of the federally-listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB). The 10-day notification for this project was submitted on March 8, 2007 stating that surveys would be performed by Robin Church, permit number TE-812206-3, Andrew Pigniolo permit number TE-0503020, or another permitted biologist.

Quino checkerspot butterfly was not observed during the survey. Additionally, dwarf plantain (*Plantago erecta*), the Quino checkerspot butterfly's primary host plant, was not observed onsite.

Site Location and Description

The 2.16 acre project area is located in the southeastern portion of San Diego County within the Community of Lakeside in the County of San Diego (Figure 1). It is located west of Highway 67 and north of the San Diego River. The project area is shown on the El Cajon USGS 7.5' Quadrangle in Township 15 South, Range 1 West, Section 13 (Figure 1).

The project area is located in the southern portion of San Diego County within the foothills and interior valleys of the region. The property has southeasterly and northeasterly facing slopes with an area in the center that is generally flat. Elevations range from 556 feet above mean sea level (AMSL) in the west to 404 feet AMSL in the east.

The soils onsite include riverwash (Rm), Cieneba Fallbrook rocky sandy loam, 30 to 65 percent slopes (CnG2) and Tujunja sand, 0 to 5 percent slopes (TuB).

Vegetation Communities

Habitat assessments were performed during the prior surveys by RC Biological Consulting, Inc. in April and May of 2006 and March 2007 that indicated the absence of dwarf plantain (*Plantago erecta*), the host plant for the Quino checkerspot butterfly. No dwarf plantain was identified during this survey effort or the sensitive plant surveys performed in 2006 by this company. The distribution and size of the habitat communities onsite is based on the mapping effort performed by RC Biological Consulting, Inc. in May of 2006. Habitat communities identified onsite include non-native grassland, disturbed and developed. The acreages are listed below in Table 1.

Table 1
Habitat Acreages on the Lakeside Self Storage Property

Habitat Type	**Acres**
Developed	1.30
Disturbed	0.72
Non-Native Grassland	0.14
Total	**2.16**

Quino Checkerspot Survey Methods

Initiation of the flight season was the result of performing field visits with Ms. Alison Anderson to the Marron Valley monitored population, conversations with Ms. Anderson, and the site conditions with regard to presence of host plant and/or nectar sources, and observation of adults in Dulzura. Termination of the flight season was based on no longer observing adults in Dulzura.

Survey methods followed those outlined in the Year 2002 Survey Protocol for the Quino checkerspot butterfly (USFWS 2002) with the exception of the amount of acres covered per hour. Approximately <1 acre per hour was surveyed (protocol requires no more than 15 acres per hour). Due to low rainfall potentially resulting in decreased numbers of adults, the site was surveyed at a slower rate to increase the probability of detection. Surveys consisted of linear transects within the non-native grassland and disturbed habitats. Excluded areas included the developed land.

Six site visits under protocol conditions were conducted to insure adequate coverage of the site during the flight season. Survey conditions are detailed in Table 2. Field notes are attached in Appendix II.

Table 2 Surveys performed on the Lakeside Self Storage Property						
Date	**Time**	**Survey**	**Temperature (ºF)**	**Sky**	**Wind (mph)**	**Observers**
3/19/07	11:55-12:30	Quino Habitat Evaluation	74°-75°	10% cloud cover	3-7	Sara Thorne
3/22/07	12:00 - 12:30	Focused Quino	66°-67°	Clear	5-10	Andrew Drummond
3/27/04	12:10-12:45	Focused Quino	67°	Clear	0-3	Robin Church
4/04/07	11:25-11:55	Focused Quino	72°- 73°	Clear	2-5	Sara Thorne
4/09/07	14:10-14:40	Focused Quino	77°	10% cloud cover	2-5	Sara Thorne
4/17/07	12:15-12:45	Focused Quino	70°	Clear	0-5	Sara Thorne
4/25/07	11:55-12:25	Focused Quino	71°	Clear	1-3	Sara Thorne

Excluded Areas

Approximately 1.30 acres of the total project site were excluded from the survey area (Figure 2). This area included developed lands, unsuitable for Quino checkerspot butterfly. The total area surveyed was approximately 0.86 acres and consisted of non-native grassland and disturbed habitats.

Host Plants and Nectar Sources

The Quino checkerspot butterfly's primary host plant species include: dwarf plantain (*Plantago erecta),* wooly plantain *(Plantago patagonica),* white snapdragon *(Antirrhinum coulterianum)* and/or dark-tip bird's beak (*Cordylanthus rigidus)* (USFWS 2002) as well as Chinese houses (*Collinsia* sp.) and possibly other Scrophulariaceae (Ballmer 2000). The Quino checkerspot butterfly's secondary host plant species include: purple owl's clover (*Castilleja exserta).* Dwarf plantain, the primary host plant for Quino, was not found onsite. None of the additional Quino host plants listed above were identified onsite.

Quino checkerspot butterfly nectar sources include: onion (*Allium* spp.), fiddleneck (*Amsinkia* ssp.), yarrow (*Achillea millefolium),* popcornflower (*Cryptantha* spp. & *Plagiobothrys* sp.), California buckwheat (*Eriogonum fasciculatum),* gilia (*Gilia* sp.), goldfields (*Lasthenia* spp.), lomatium (*Lomatium* sp.), monkeyflower (*Mimulus* sp.), goldenstar (*Muilla* sp.), (USFWS 2002) as well as chia (*Salvia columbariae),* blue dicks (*Dichelostemma pulchellum)* and various mustards (Ballmer 2000). Nectar sources that occurred onsite included: black mustard and California buckwheat.

Butterflies Observed

Quino checkerspot butterfly was not observed onsite. Eight butterfly species were observed on the property during the surveys, in addition to two unidentified blue butterflies (see Table 3). (Scientific nomenclature and common names for butterfly species listed follows Ballmer 2000).

Table 3
Butterflies Observed During Surveys

Species	Week						Total
	1	2	3	4	5	6	
Behr's metalmark (*Apodemia mormo virgulti*)	1		1				1
Cabbage white (*Artogeia rapae*)			1				1
Common Buckeye (*Precis coenia*)				1		2	3
Fiery Skipper (*Hylephila phyleus*)					1		1
Funereal duskywing (*Erynnis funeralis)*	1	2					3
Painted lady (*Vanessa cardui*)				1			1
Sara orange-tip (*Anthocheris sara*)	2			2	1		5
Western tiger swallowtail (*Papilio rutulus*)				1			1
Unidentified blue			2				2

Conclusion

The Quino checkerspot butterfly was not observed onsite during the survey. This species has a low potential to occur onsite. The Quino checkerspot butterfly's main host plant, dwarf plantain (*Plantago erecta*), was not identified onsite.

The nearest known populations of QCB are at Mission Trails Regional Park approximately 8.5 miles from the project site, and Alpine approximately 8 miles from the project site. At a landscape scale, the Lakeside Self Storage Property is different from other QCB occupied sites in San Diego County. The site is located at the bottom of a hillside with southeasterly and northeasterly facing slopes. There are no prominent hilltops or ridges on the site. It is unlikely that the site could support a sustained population of QCB. Given this negative survey, the negative QCB habitat evaluations performed in 2006 and 2007 by RC Biological Consulting, Inc., the negative host plant observations, and the current conditions onsite, the probability of QCB occupying the Lakeside Self Storage Property is low.

Certification

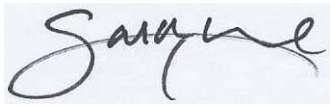
This concludes the report for a focused survey for the Quino checkerspot butterfly conducted on the Lakeside Self Storage Property.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

If you have any questions please do not hesitate to call.

Sincerely,

Andrew Drummond
Permit #TE-134332-0



Sara Thorne
Permit #TE-053020-1

Robin Church
Permit #TE-812206-3

References

Ballmer, G., Hawks, D., Osborne, K., and Pratt, G., 2000. *The Quino Checkerspot Butterfly; Euphydryas editha quino*. Unpublished manuscript distributed at the Quino Workshop, January 2000, Riverside, California.

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-- U.S. Fish and Wildlife Service, 2000. *Year 2000 Survey Protocol: Quino Checkerspot Butterfly (Euphydryas editha quino)*. Unpublished manuscript, available from the Carlsbad Field Office, Carlsbad, California.

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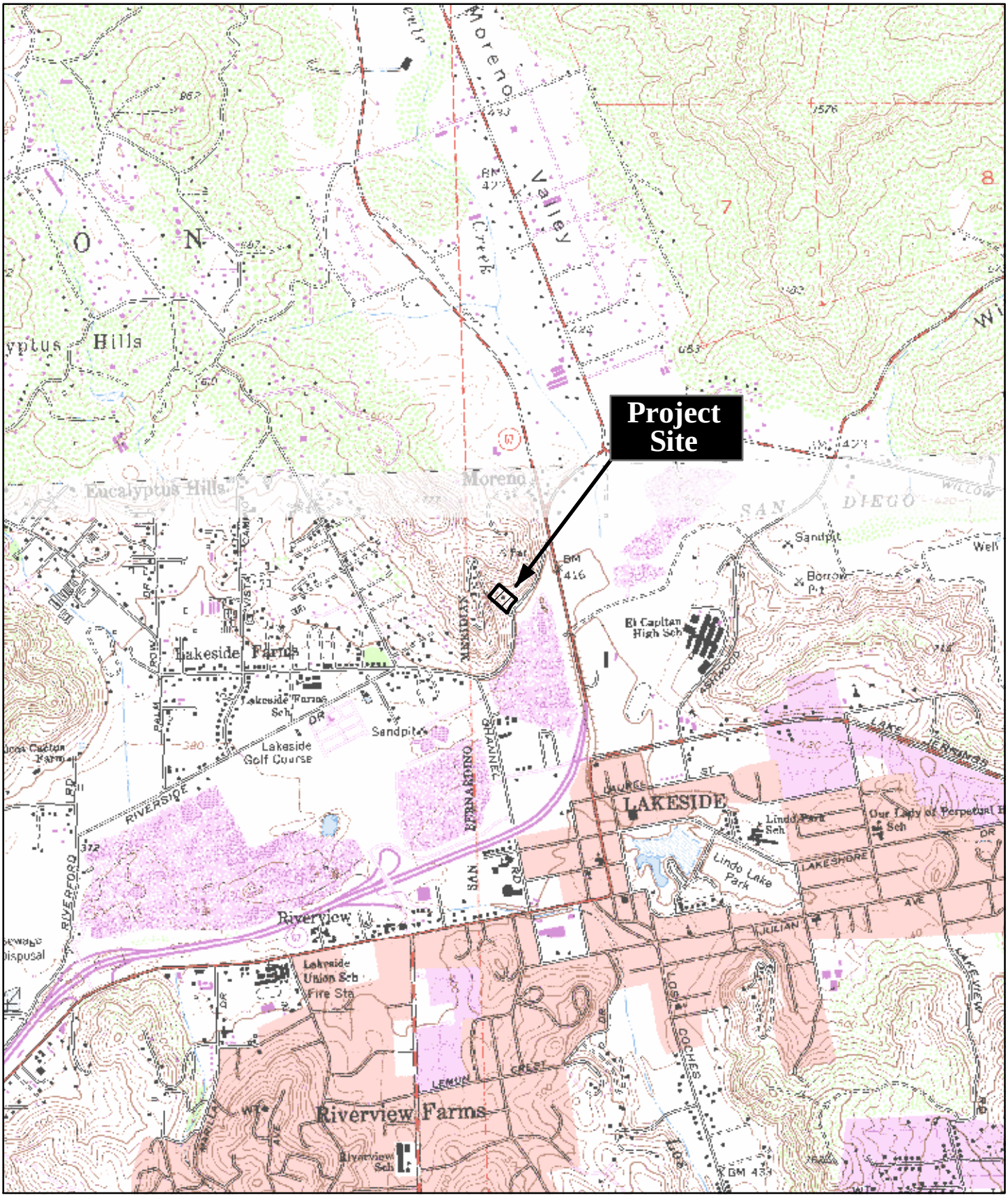
Appendix I
Figures



Source: USGS 7.5' El Cajon Quadrangle

Figure 1
Project Location
Route 67 Self Storage Property

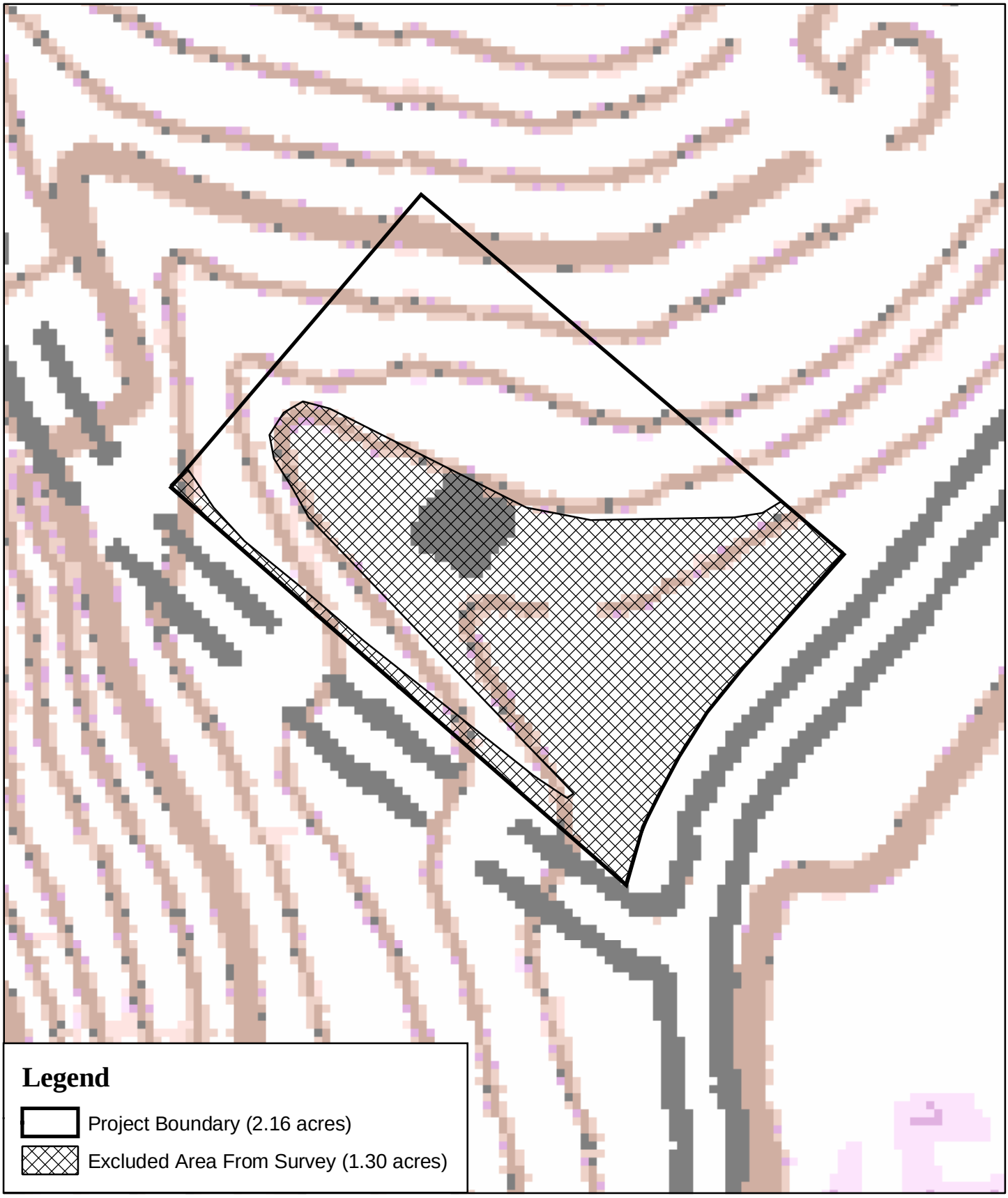


Figure 2
Survey Area
Route 67 Self Storage

Appendix II
Field Notes

Lakeside Self Storage 3-19-04

11:55 am / 90% sunny / winds 3-7 mph / 74°F

12:30 pm / " " / 75°F

survey: Quino Habitat Evaluation

surveyor: S. Thorne

Habitat: NNG - no host plant observed onsite.
Mustard is in bloom, mirabilis in bloom
Approx. 0.72 acres are surveyable

funeral dusk - 11

Sara's - 11

Bahis - 1

Quino Survey Data Form

LAKESIDE SELF STORAGE

DATE: 3/22/07
SURVEYOR: Andrew Drummond (TE-134332-0)

	Start Conditions	End Conditions
Time:	12:00PM	12:30 PM
Temp:	66 °F	67°F
Sky:	CLEAR	CLEAR
Wind:	5-10MPH	5-10MPH

Host Plant Observations:

NONE

Funereal Duskywing 11

Notes:

3/27/07 Lakeside self storage Quino

12:10 – 12:45
67 same
0-3 same
Clear same

Cabbage white 1
Behr's metalmark 1
unid blue 11

Bloom
mustard
lotus scoparius
erodium cicutarium
morning glory
rattlesnake spurge
Viguiera
Mirabilis

goldfinch (NNG) 11
Raven (OH) 1
northern roughwing swallow (OH) 11
Blk Phoebe – 1
NNG/DEV
Cass kingbird (NNG) 1
gr. squirrel – 1
DEV
White crowned sparrow - dev
Orange throated whiptail 11
(NNG)

Fig 1

Lakeside Self Storage 4-4-07

start 11:25 am / clear + sunny / 72° F / 2-5 MPH
stop 11:55 am / " / 73° F / "
survey: Focused Quino
surveyor: S. Thorne

Habitat: NNG, CSS
In bloom: brassica nigra, viguiera, erodium, mirabilis

sara's otip - 11	hover fly - 1
co. white - 1	OTWT - 14
western tiger sw. - 1	bee - 11
painted lady - 1	granite spiny - 11

No host plants observed during the survey.

Lakeside Self Storage 4-9-07

start 14:10 / 10% cloud cover / 79°F / 2-5 MPH winds

stop 14:40 / " / " / "

survey Focused Quino checkerspot

surveyor S. Thorne

Habitat: MNG

Flowering plants Brassica nigra, viguiera, mirabilis,

sara's ship-1

OTWT-11

dragonfly-1

rufous sided towhee-1

modo-11

Lakeside Self Storage 4-17-07

start 12:15 / clear sunny / 0-5 mph / 70° F
stop: 12:45 / " " / " " / "
survey: Focused Quino checkerspot
surveyor: S. Thorne

Habitat:
Flowering plants: Brassica, viguiera, erodium,

Fiery skipper-1

red-tailed HAWKS- III (OH)
OTUT- II
cottontail-1
ca ground sq-II
bee- IIII
anna's-II
dragonfly-1

Lakeside Self Storage 4-25-07

start: 11:55 / clear + sunny / 1-3 mph / 71°F

stop: 12:25 / " " / " " / "

survey: Focused Quino Checkerspot

surveyor: S. Thorne

Habitat

Flowering: brassica, viguiera, morning glory, mirabilis

Co. white - 11 OTWT - 1